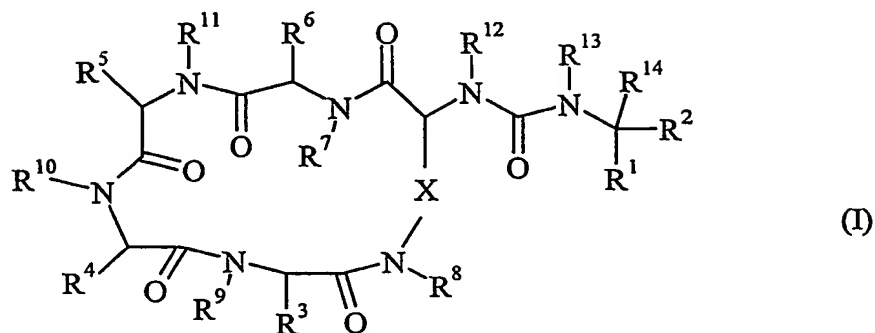


CLAIMS

1. The use of a compound of formula (I):



5 wherein:

X is $(CH_2)_m Y (CH_2)_n$;

m and n are, independently, 1, 2, 3, 4, 5 or 6; provided that m + n is not more than 6;

Y is a bond, O, $S(O)_p$, or S-S;

R^1 is CO_2R^{15} or a carboxylic acid isostere such as $S(O)_2OH$, $S(O)_2NHR^{15}$,

10 $PO(OR^{15})OH$, $PO(OR^{15})NH_2$, $B(OR^{15})_2$, $PO(R^{15})OH$, $PO(R^{15})NH_2$ or tetrazole;

R^2 , R^3 , R^4 , R^5 and R^6 are, independently, hydrogen, C_{1-6} alkyl (optionally substituted by halogen, hydroxy, cyano, SH, $S(O)_3H$, $S(O)_q(C_{1-6}$ alkyl), $OC(O)(C_{1-4}$ alkyl), CF_3 , C_{1-4} alkoxy, OCF_3 , $COOH$, $CONH_2$, $CONH(C_{1-6}$ alkyl), NH_2 , $CNH(NH_2)$, or

15 $NHCNH(NH_2)$), C_{3-6} cycloalkyl(C_{1-4})alkyl (wherein the cycloalkyl ring is optionally substituted by halogen, hydroxy, cyano, C_{1-4} alkyl, CF_3 , C_{1-4} alkoxy, OCF_3 , NH_2 , $CNH(NH_2)$ or $NHCNH(NH_2)$), heterocyclyl(C_{1-4})alkyl (wherein the heterocyclyl ring is optionally substituted by halogen, hydroxy, cyano, C_{1-4} alkyl, CF_3 , C_{1-4} alkoxy, OCF_3 , NH_2 , $CNH(NH_2)$ or $NHCNH(NH_2)$), phenyl(C_{1-4})alkyl (wherein the phenyl ring is optionally substituted by halogen, hydroxy, cyano, C_{1-4} alkyl, CF_3 , C_{1-4} alkoxy, OCF_3 , NH_2 , $CNH(NH_2)$ or $NHCNH(NH_2)$) or heteroaryl(C_{1-4})alkyl (wherein the heteroaryl ring is optionally substituted by halogen, hydroxy, cyano, C_{1-4} alkyl, CF_3 , C_{1-4} alkoxy, OCF_3 , NH_2 , $CNH(NH_2)$ or $NHCNH(NH_2)$);

p and q are, independently, 0, 1 or 2;

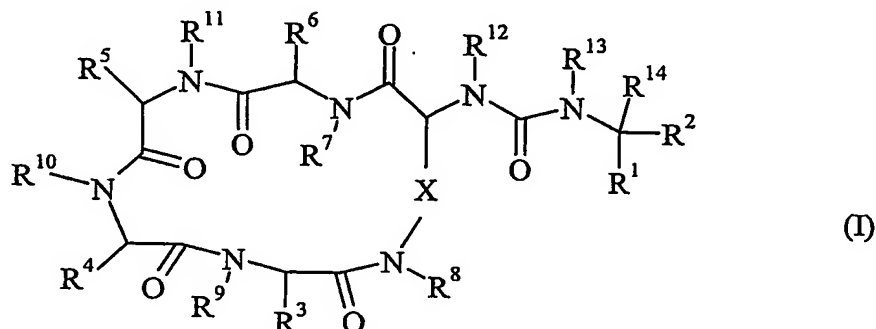
R^7 , R^8 , R^9 , R^{10} , R^{11} , R^{12} and R^{13} are, independently, H or C_{1-4} alkyl;

25 R^{14} is H or C_{1-4} alkyl; and,

R^{15} is H or C_{1-4} alkyl;

or a pharmaceutically acceptable salt or solvate thereof, or a solvate of such a salt; in a method of manufacturing a medicament for the treatment or prophylaxis of a condition wherein inhibition of carboxypeptidase U is beneficial.

5 2. A compound of formula (I):



wherein:

X is (CH₂)₄;

R¹ is CO₂R¹⁵;

10 R² is straight-chain C₁₋₆ alkyl substituted at its terminus by NH₂, CNH(NH₂) or NHCNH(NH₂); C₃₋₆ cycloalkyl substituted by NH₂, CNH(NH₂) or NHCNH(NH₂); heterocyclyl containing at least one nitrogen atom; non-nitrogen containing heterocyclyl substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); heteroaryl substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); phenyl substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); heteroaryl(C₁₋₄)alkyl substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); phenyl(C₁₋₄)alkyl substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); or C₃₋₆ cycloalkyl(C₁₋₄)alkyl substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); all of the above rings being optionally further substituted by one or more of: halogen, hydroxy, cyano, C₁₋₄ alkyl, CF₃, C₁₋₄ alkoxy or OCF₃;

20 one of R³, R⁴, R⁵ and R⁶ is independently, hydrogen, heteroaryl(C₁₋₄)alkyl (wherein the heteroaryl ring is optionally substituted by halogen, hydroxy, cyano, C₁₋₄ alkyl, CF₃, C₁₋₄ alkoxy, OCF₃, NH₂, CNH(NH₂) or NHCNH(NH₂)); and the others are, independently, hydrogen, C₁₋₆ alkyl (optionally substituted by halogen, hydroxy, cyano, SH, S(O)₃H, S(O)_q(C₁₋₆ alkyl), OC(O)(C₁₋₄ alkyl), CF₃, C₁₋₄ alkoxy, OCF₃, COOH, CONH₂, CONH(C₁₋₆ alkyl), NH₂, CNH(NH₂), or NHCNH(NH₂)), C₃₋₆

25 cycloalkyl(C₁₋₄)alkyl (wherein the cycloalkyl ring is optionally substituted by halogen,

hydroxy, cyano, C₁₋₄ alkyl, CF₃, C₁₋₄ alkoxy, OCF₃, NH₂, CNH(NH₂) or NHCNH(NH₂), heterocyclyl(C₁₋₄)alkyl (wherein the heterocyclyl ring is optionally substituted by halogen, hydroxy, cyano, C₁₋₄ alkyl, CF₃, C₁₋₄ alkoxy, OCF₃, NH₂, CNH(NH₂) or NHCNH(NH₂)), phenyl(C₁₋₄)alkyl (wherein the phenyl ring is optionally substituted by halogen, hydroxy, cyano, C₁₋₄ alkyl, CF₃, C₁₋₄ alkoxy, OCF₃, NH₂, CNH(NH₂) or NHCNH(NH₂)) or heteroaryl(C₁₋₄)alkyl (wherein the heteroaryl ring is optionally substituted by halogen, hydroxy, cyano, C₁₋₄ alkyl, CF₃, C₁₋₄ alkoxy, OCF₃, NH₂, CNH(NH₂) or NHCNH(NH₂));

p and q are, independently, 0, 1 or 2;

R⁷, R⁸, R⁹, R¹⁰, R¹¹, R¹² and R¹³ are, independently, H or C₁₋₄ alkyl;

R¹⁴ is H or C₁₋₄ alkyl; and,

R¹⁵ is H or C₁₋₄ alkyl;

or a pharmaceutically acceptable salt or solvate thereof, or a solvate of such a salt.

3. A compound of formula (I) or a pharmaceutically acceptable salt or solvate thereof, or a solvate of such a salt. as claimed in claim 2 wherein:

X is (CH₂)₄;

R¹ is CO₂R¹⁵;

R² is straight-chain C₁₋₆ alkyl substituted at its terminus by NH₂, CNH(NH₂) or

NHCNH(NH₂); C₃₋₆ cycloalkyl substituted by NH₂, CNH(NH₂) or NHCNH(NH₂);

heterocyclyl containing at least one nitrogen atom; non-nitrogen containing heterocyclyl

substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); heteroaryl substituted with NH₂,

CNH(NH₂) or NHCNH(NH₂); phenyl substituted with NH₂, CNH(NH₂) or NHCNH(NH₂);

heteroaryl(C₁₋₄)alkyl substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); phenyl(C₁₋₄)alkyl

substituted with NH₂, CNH(NH₂) or NHCNH(NH₂); or C₃₋₆ cycloalkyl(C₁₋₄)alkyl substituted

with NH₂, CNH(NH₂) or NHCNH(NH₂); all of the above rings being optionally further

substituted by one or more of: halogen, hydroxy, cyano, C₁₋₄ alkyl, CF₃, C₁₋₄ alkoxy or OCF₃;

one of R³, R⁴, R⁵ and R⁶ is independently, hydrogen, heteroaryl(C₁₋₄)alkyl (wherein the heteroaryl ring is optionally substituted by halogen, hydroxy, cyano, C₁₋₄ alkyl, CF₃, C₁₋₄

alkoxy, OCF₃, NH₂, CNH(NH₂) or NHCNH(NH₂)); and the others are, independently,

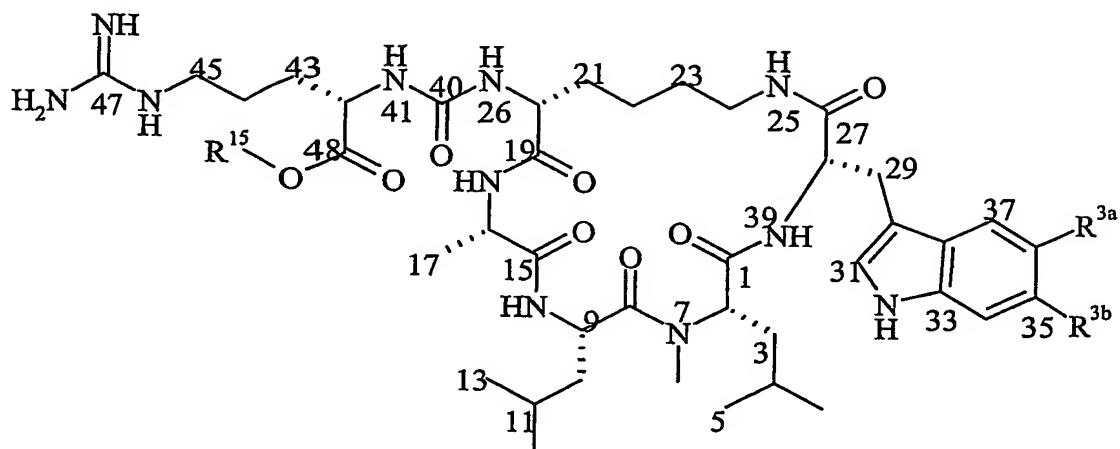
hydrogen, C₁₋₆ alkyl (optionally substituted by halogen, hydroxy, cyano, SH, S(O)₃H,

S(O)₄(C₁₋₆ alkyl), OC(O)(C₁₋₄ alkyl), CF₃, C₁₋₄ alkoxy, OCF₃, COOH, CONH₂, CONH(C₁₋₆

- alkyl), NH_2 , $\text{CNH}(\text{NH}_2)$, or $\text{NHCNH}(\text{NH}_2)$), C_{3-6} cycloalkyl(C_{1-4})alkyl (wherein the cycloalkyl ring is optionally substituted by halogen, hydroxy, cyano, C_{1-4} alkyl, CF_3 , C_{1-4} alkoxy, OCF_3 , NH_2 , $\text{CNH}(\text{NH}_2)$ or $\text{NHCNH}(\text{NH}_2)$), heterocyclyl(C_{1-4})alkyl (wherein the heterocyclyl ring is optionally substituted by halogen, hydroxy, cyano, C_{1-4} alkyl, CF_3 , C_{1-4} alkoxy, OCF_3 , NH_2 , $\text{CNH}(\text{NH}_2)$ or $\text{NHCNH}(\text{NH}_2)$), phenyl(C_{1-4})alkyl (wherein the phenyl ring is optionally substituted by halogen, hydroxy, cyano, C_{1-4} alkyl, CF_3 , C_{1-4} alkoxy, OCF_3 , NH_2 , $\text{CNH}(\text{NH}_2)$ or $\text{NHCNH}(\text{NH}_2)$) or heteroaryl(C_{1-4})alkyl (wherein the heteroaryl ring is optionally substituted by halogen, hydroxy, cyano, C_{1-4} alkyl, CF_3 , C_{1-4} alkoxy, OCF_3 , NH_2 , $\text{CNH}(\text{NH}_2)$ or $\text{NHCNH}(\text{NH}_2)$);
- 10 p and q are, independently, 0, 1 or 2;
 R^7 , R^8 , R^9 , R^{10} , R^{11} , R^{12} and R^{13} are, independently, H or C_{1-4} alkyl;
 R^{14} is H or C_{1-4} alkyl; and,
 R^{15} is H or C_{1-4} alkyl;
 or a pharmaceutically acceptable salt or solvate thereof, or a solvate of such a salt.
- 15
4. A compound of formula (I) or a pharmaceutically acceptable salt or solvate thereof, or a solvate of such a salt as claimed in claim 2 or 3 wherein:
- R^1 is CO_2R^{15} ;
- R^2 is straight-chain C_{1-6} alkyl substituted at its terminus by NH_2 , $\text{CNH}(\text{NH}_2)$ or
- 20 $\text{NHCNH}(\text{NH}_2)$; C_4 alkyl (such as $\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$ or $\text{CH}_2\text{CH}(\text{CH}_3)_2$); or (aminopyridinyl)methyl (for example (6-aminopyridin-3-yl)methyl);
- one of R^3 and R^4 is (indol-3-yl) CH_2 optionally substituted by halo or hydroxy; and the other is benzyl (optionally substituted by halo or hydroxy) or C_4 alkyl (such as $\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$ or $\text{CH}_2\text{CH}(\text{CH}_3)_2$);
- 25 or R^3 and R^4 are both methyl;
- R^5 and R^6 are, independently, C_{1-6} alkyl (for example CH_3 , $\text{CH}(\text{CH}_3)_2$, $\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$ or $\text{CH}_2\text{CH}(\text{CH}_3)_2$);
- R^7 , R^8 , R^9 , R^{11} , R^{12} , R^{13} and R^{14} are H;
- R^{10} is C_{1-4} alkyl; and,
- 30 R^{15} is H or C_{1-4} alkyl.
5. A compound as claimed in any one of claims 2 to 4 wherein X is $(\text{CH}_2)_4$.

6. A compound as claimed in any one of claims 2 to 5 wherein R^1 is CO_2R^{15} in which R^{15} is H or C_{1-4} alkyl.
7. A compound as claimed in any one of claims 2 to 6 wherein R^2 is straight-chain C_{1-6} alkyl substituted at its terminus by NH_2 , $CNH(NH_2)$ or $NHCNH(NH_2)$; C_4 alkyl (such as $CH(CH_3)CH_2CH_3$ or $CH_2CH(CH_3)_2$); or (aminopyridinyl)methyl.
8. A compound as claimed in any one of claims 2 to 4 wherein R^2 is C_{1-6} alkyl ($CH(CH_3)CH_2CH_3$ or $CH_2CH(CH_3)_2$), benzyl, or straight-chain C_{1-6} alkyl substituted at its terminus by NH_2 , $CNH(NH_2)$, $NHCNH(NH_2)$ or (6-aminopyridin-3-yl)methyl.
9. A compound as claimed in any one of claims 2 to 8 wherein R^2 is straight-chain C_{1-6} alkyl substituted at its terminus by NH_2 , $CNH(NH_2)$, $NHCNH(NH_2)$ or (6-aminopyridin-3-yl)methyl.
10. A compound as claimed in any one of claims 2 to wherein R^3 is CH_2 indolyl (wherein the indolyl is optionally substituted by one or more of: halogen or hydroxy, C_{1-4} alkyl or benzyl (optionally substituted by halogen or hydroxy)).
11. A compound as claimed in any one of claims 2 to 10 wherein R^4 is CH_2 indolyl (wherein the indolyl is optionally substituted by one or more of: halogen or hydroxy, C_{1-6} alkyl ($CH(CH_3)CH_2CH_3$ or $CH_2CH(CH_3)_2$) or benzyl (optionally substituted by halogen or hydroxy).
12. A compound as claimed in any one of claims 2 to 11 wherein R^5 and R^6 are, independently, C_{1-6} alkyl (such as methyl, iso-propyl, $CH(CH_3)CH_2CH_3$ or $CH_2CH(CH_3)_2$).
13. A compound as claimed in any one of claims 2 to 12 wherein R^7 , R^8 , R^9 , R^{11} , R^{12} , R^{13} and R^{14} are all H.
14. A compound as claimed in any one of claims 2 to 4 wherein R^{10} is C_{1-4} alkyl.
15. A compound as claimed in claim 2 which is a compound of the following formula

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in which

R^{3a} is H, R^{3b} is H and R^{15} is H;

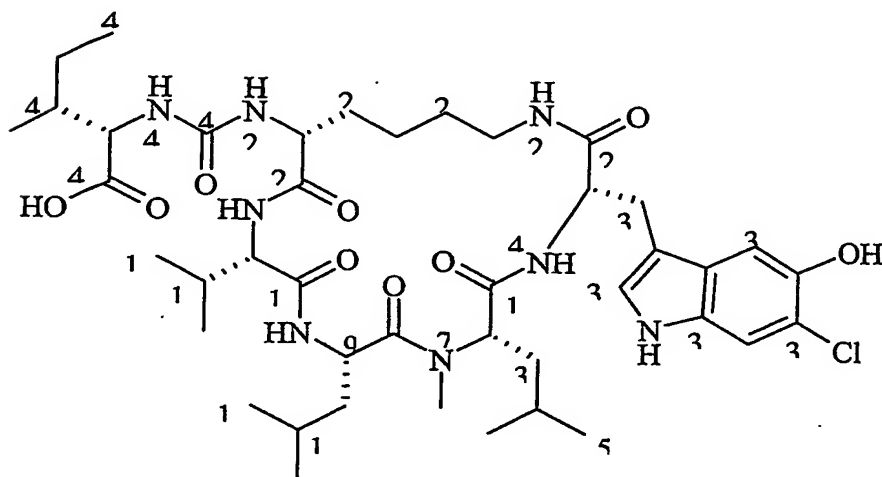
R^{3a} is OH, R^{3b} is Cl and R^{15} is H;

5 R^{3a} is OH, R^{3b} is Cl and R^{15} is CH_3 ;

R^{3a} is H, R^{3b} is H and R^{15} is CH_3 ;

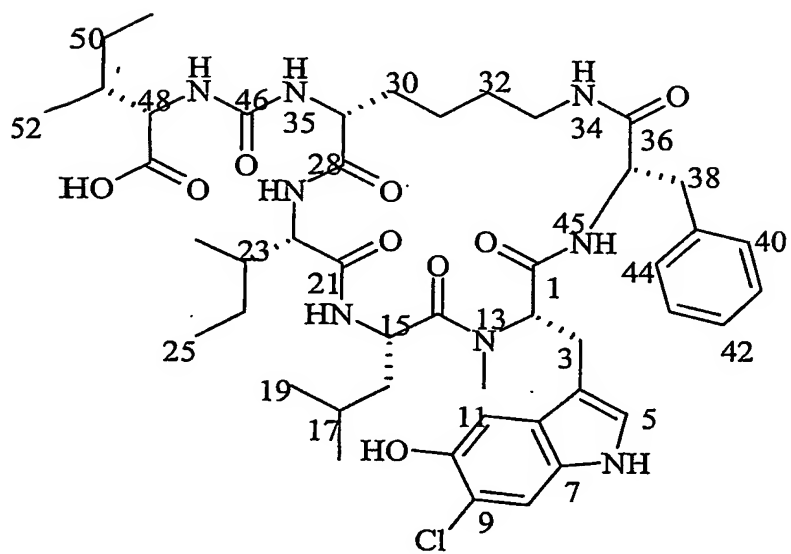
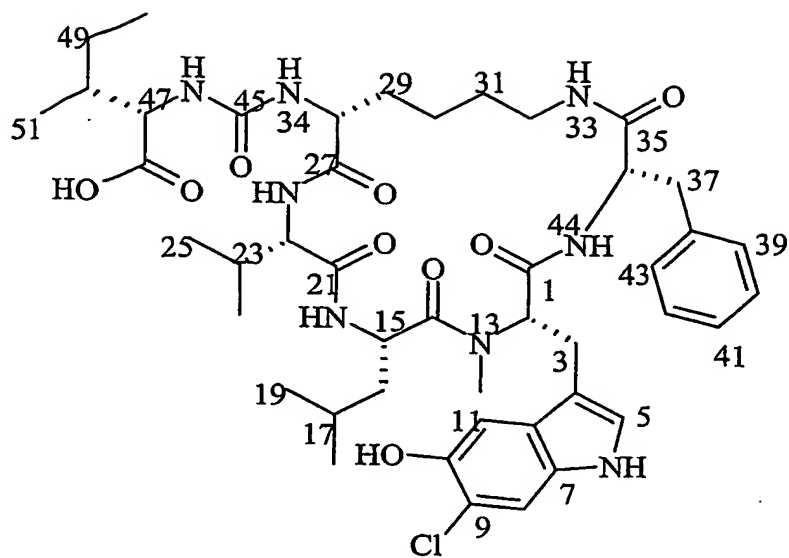
R^{3a} is H, R^{3b} is Cl and R^{15} is H;

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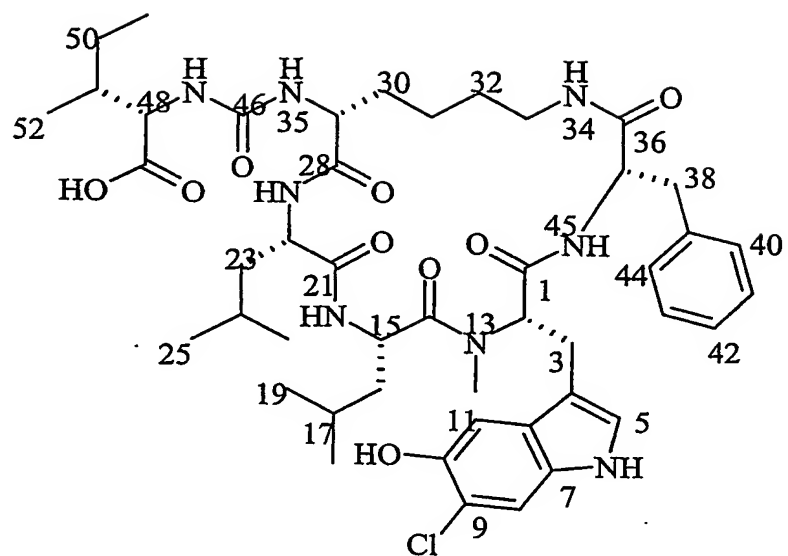


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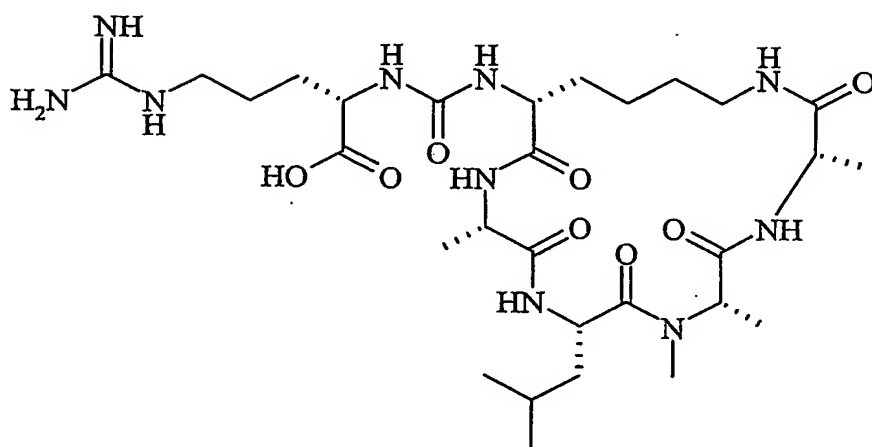
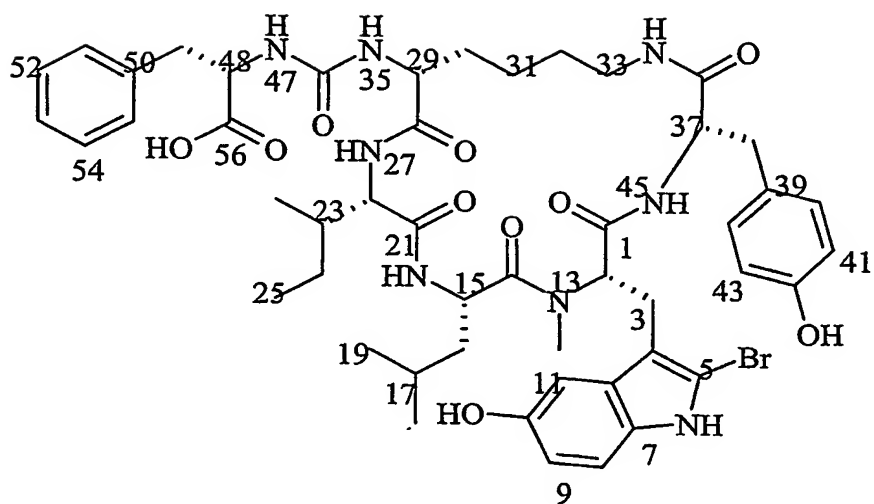
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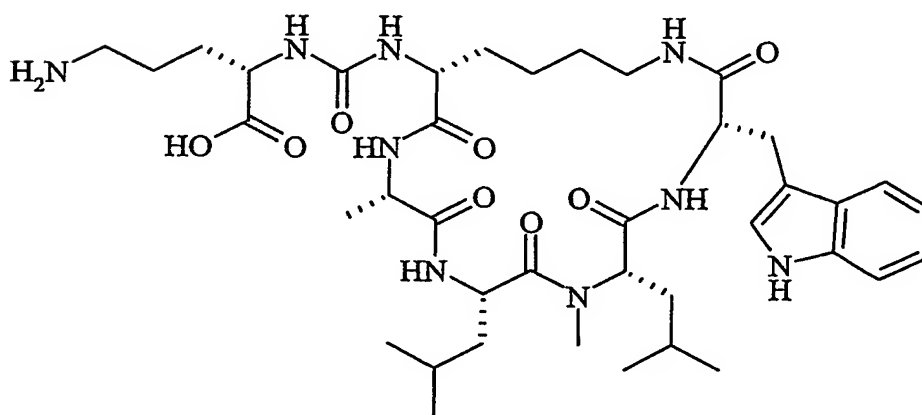
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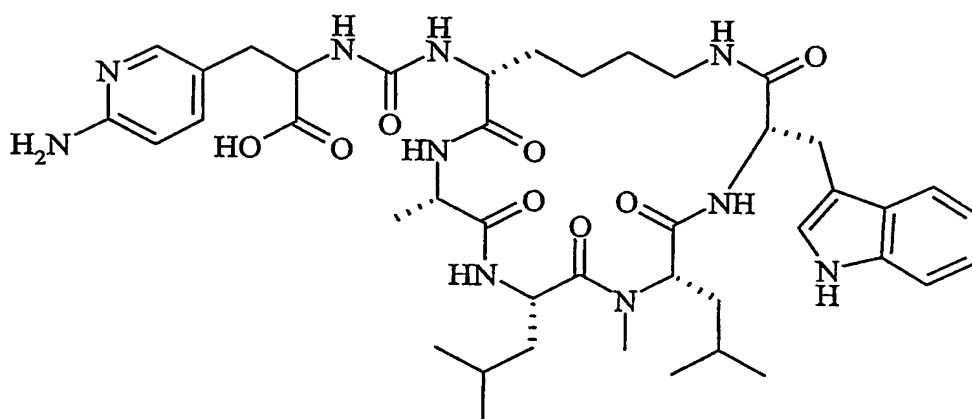
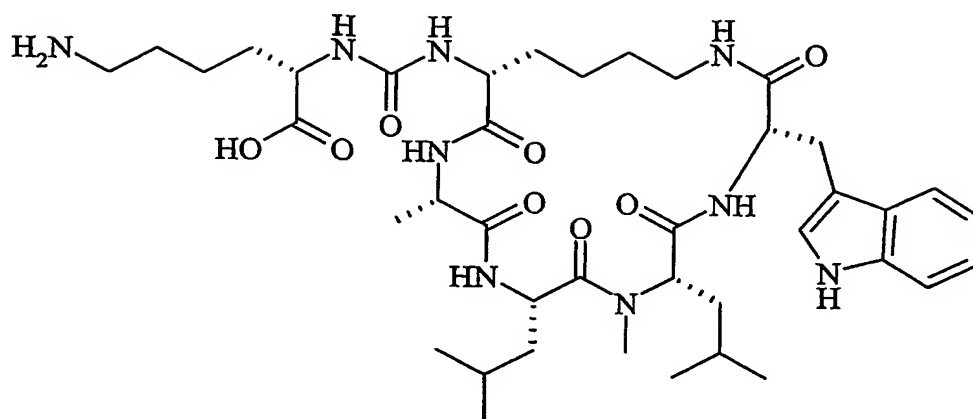


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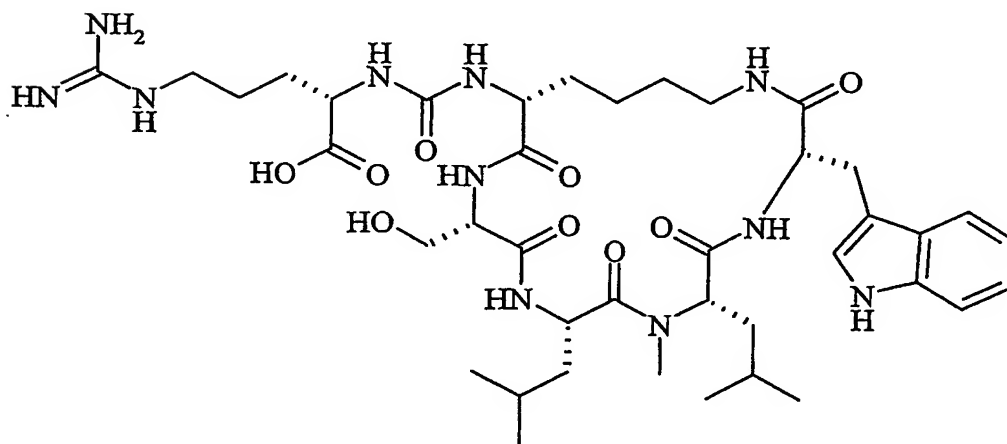


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or a pharmaceutically acceptable salt or solvate thereof, or a solvate of a pharmaceutically acceptable salt thereof.

16. The use of a compound of formula (I) or a pharmaceutically acceptable salt or solvate thereof, or a solvate of such a salt; as claimed in any one of claims 2 to 15 in a method of manufacturing a medicament for the treatment or prophylaxis of a condition wherein inhibition of carboxypeptidase U is beneficial.

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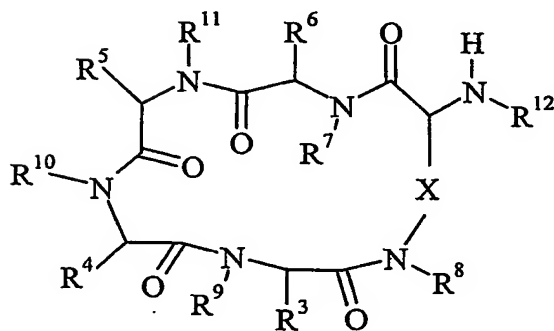
17. The use as claimed in claim 16 for the manufacture of a medicament for the treatment or prophylaxis of thrombosis and/or hypercoagulability in blood and/or tissues; atherosclerosis; fibrotic conditions; inflammatory diseases; or a condition which benefits from maintaining or enhancing bradykinin levels in the body of a mammal (such as man).

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18. A pharmaceutical formulation containing a compound of formula (I) or a pharmaceutically acceptable salt or solvate thereof, or a solvate of such a salt; as claimed in any one of claims 2 to 15 as active ingredient in combination with a pharmaceutically acceptable adjuvant, diluent or carrier.

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19. A compound of formula



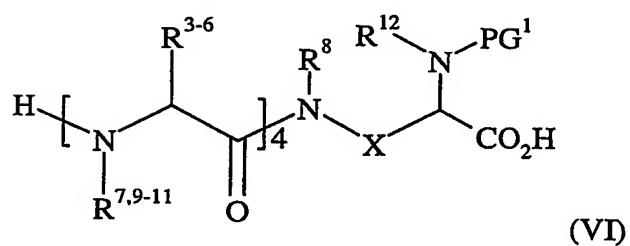
(VII)

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wherein R^3 to R^{12} and X are as defined in any one of claims 1 to 14

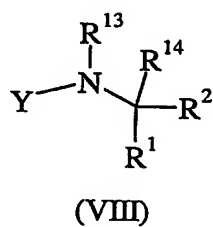
20. A process for preparing a compound as claimed in claim 19 which comprises treating a compound of formula VI in which PG1 is a suitable protecting group

with a peptide coupling agent in the presence of a non-nucleophilic base in a polar aprotic solvent and then removing the protecting group.



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21. A process for preparing a compound of formula I as claimed in any one of claims 2 to 17 which comprises reacting a compound of formula VII as defined in claim 19 with a compound of formula VIII



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in which Y is an activated ester or NY is an isocyanate group.

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